



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

RBW6405G02131-3G-5

Job Sheet 171015



Part No: RBW6405G02131-3G-5

Job Qty: 4 ea

Part Name: Quarter Bell



Part Weight: 0 lbs

Status: Scheduled

Priority: Medium

Job Created: 1/25/18

Job Tracking No:

Due Date: 1/31/18

Created By: Marie Lajeunesse

Type: Stock

Description:

Note: DWG RBW6405G02131-3G REV D SHEET 4 IPP Rev.A 17.08.30 New issue DP Verify DD/IPP Rev D 17.11.15 Rev D DP Verify DD

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup hrs	Run Hrs	Workcenter / Supplier	Lead Time	
90	Start up Operation	4 Ea		1/16/18	0.00	0.00	Start Up Machining-3		SL 18-1-31
110	CNC Lathe	4 pcs		1/17/18	0.00	1.00	MORI SL-154		SL
120	QC	4 pcs		1/17/18	0.00	0.00	QC2 Machining-4		SL
130	QC	4 pcs		1/17/18	0.00	0.00	QC8 Machining-4		SL
140	Outsource	4 pcs		1/31/18			GRO002-VC	Outsourced 1/31/18	AT 18/02/15
150	Packaging	4 pcs		1/31/18	0.00	0.00	Packaging2		Chm 18/02/15
160	QC	4 pcs		1/31/18	0.00	0.00	QC6		38
210	Packaging	4 pcs		1/31/18	0.00	0.00	Packaging3-1	GA	FEB 16 2018
220	QC21-SA	4 Ea		1/31/18	0.00	0.00	QC21		FEB 16 2018

Part Op 110 - 1-Machine as per DWG. FB622 FOLIO REV:

DWG REV:

2-Debur

Descriptions: 140 - -Issue P/O to Groupe Altech: P/O 038997 -Zinc plate, ASTM B633 TYPE 1 SC2 - Certificate of Conformity is required

FEB 08 2018

re OB

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
MT-4140QT-R1.000	AISI 4140 Quenched & Tempered Steel Round Bar 1.000"	.7120 ft (.178 ea)	90-Start up Operation	
	Dia.			

Job Allocations

Operation	Component Part	Required	Inventory	Allocated
90-Start up Operation	MT-4140QT-R1.000	1	5	0
	SC33398	-6		

Part Specifications

Specifications could not be found.

Plex 1/25/18 1:30 PM Dart.lajeunesse.marie

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION	AGAINST DEPARTMENT/PROCESS					
	Rework ☐	Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐		
	Scrap ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐		
	Use-as-is ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐		
	Suspected Unapproved ☐	Large Fab ☐	Composite ☐	Supplier ☐			

Date : _____	Step #: _____	QTY Effective : _____	MRB (QSI042) Approval
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Description Work Order Deviation	Disposition	Completed By
		Lead hand / Supervisor Approval Verification

Root Cause		
Environment ☐	No Re-verification ☐	Pressure/Forced ☐
Design ☐	Operator ☐	Bending ☐
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐
Equip/Tooling ☐	Supplier ☐	Cracks ☐
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐
Material ☐	Use for Testing ☐	Cuffs ☐
Internal Transport ☐	Poor Information ☐	Crushing ☐
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐
Substation ☐	Process Improvement ☐	Marks/Chatter ☐
Past Expiry Date ☐	Manufacturing Process ☐	
Misidentified ☐	Past Due ☐	OTHER : _____

Start up Operation
02/01/18
Job No: 171015

Change No:
Operation:
Revision:
Original Serial #: S037731
PART NO:
RBW6405G02131 - 3G - 5

S037731
AEROSPACE
DART
1270 Aberdeen Street
Hawkesbury, ON K64 1K7
CANADA
TEL: 1 613 632-5200
Email: sales@dartaero.com
www.dartaerospace.com

Quarter Bell

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

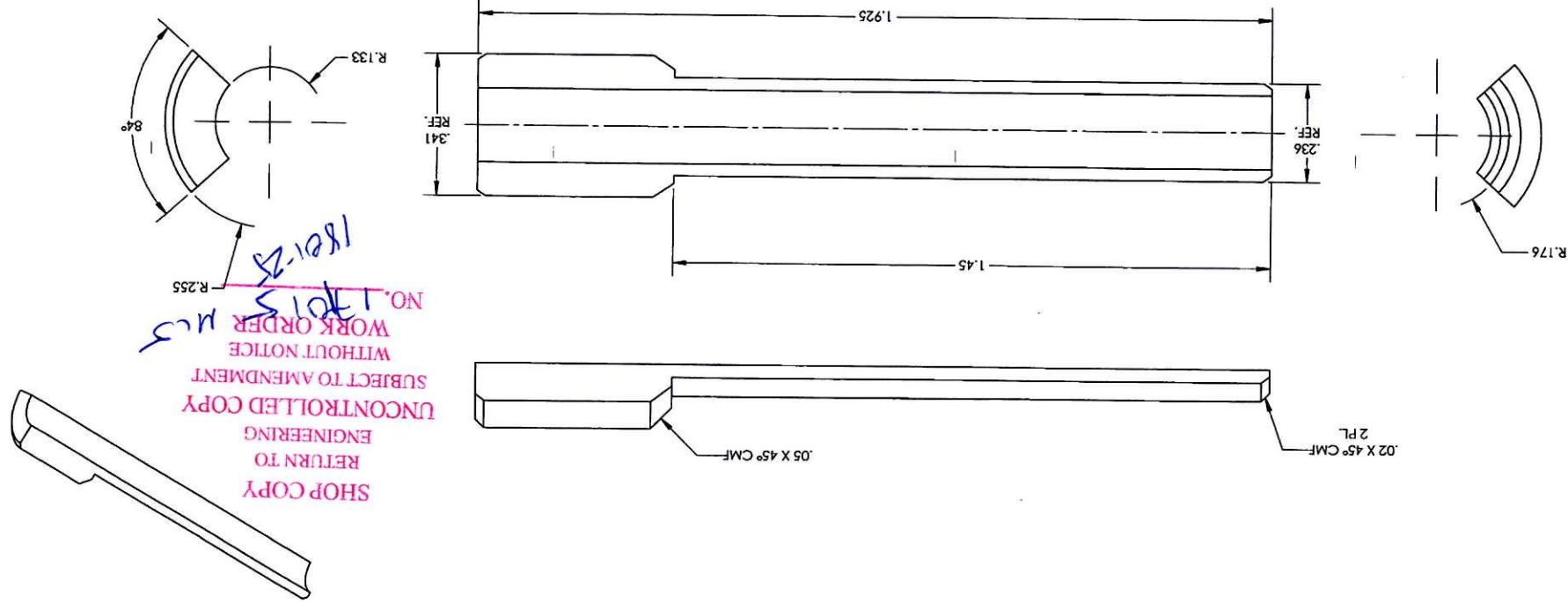
Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS <table style="width: 100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>				Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐																		
Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐																		
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Large Fab ☐	Composite ☐	Supplier ☐																			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval																	
Description Work Order Deviation		Disposition		Completed By																	
				Lead hand / Supervisor Approval Verification																	
				QC / QA Coordinator Approval																	
Root Cause		FAULT CATEGORY																			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐																
OTHER :																					

- NOTES:
- 1) MATERIAL: AISI 4140/4142 Q & T
 - 2) HEAT TREAT: 28-34 Rc
 - 3) FINISH: ZINC PLATE
 - 4) SPEC: ASTM B633 TYPE I, SC 2
 - 5) BREAK ALL SHARP EDGES .015" X 45° OR .015R
 - 6) IDENTIFICATION: N/A

CART AEROSPACE LTD 1780 DART AEROSPACE LTD 1780 DART AEROSPACE LTD 1780 DART AEROSPACE LTD	
THIS DOCUMENT IS THE PROPERTY OF CART AEROSPACE LTD. IT IS TO BE USED FOR THE PURPOSES SPECIFIED ONLY. IT IS NOT TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, WITHOUT PERMISSION IN WRITING FROM CART AEROSPACE LTD.	
TITLE: QUARTER BELL	
DWG NO.: RBW6405G02131-3G-5	
SCALE: NTS	
DATE: 07/30/2017	
DESIGNED BY: VAM 10/19/2017	
CHECKED BY: VAM 10/30/2017	
APPROVED BY: VAM 11/02/2017	
1. DIMENSIONS ARE IN INCHES	
2. UNLESS OTHERWISE SPECIFIED	
3. INTERPRET DIM AND TOL PER	
4. ASME Y14.5-2009	
5. DIMENSIONAL LIMITS APPLY	
6. AFTER PLATING	
7. WEIGHT: 0.009 LBS	
SHEET 4 OF 4	

RBW6405G02131-3G-5 QUARTER BELL





Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER PO038997

Supplier: GRO002-VC
Group Altech
2455 Halpern
St Laurent
QC
H4S 1N9 Canada
Phone: 514-335-3666
Fax: 514-335-3868

PO No: PO038997

PO Date: 2/8/18

Due Date: 2/15/18

Purchase Order

Revision:

Revision Date:

Ship-To Contact: Baker, Diane
Phone: dbaker@dartaero.com

Via: Ground

Pymt Terms: Net 30

Freight Terms:

Special Comments:

E-MAILED
FEB 12 2018

Ship To: 1270 Aberdeen Street
Hawkesbury
ON
K6A 1K7 Canada
Phone: 613-632-5200

Items										
Line Item	Job	Part	Description	Status	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
1	169930	RBW6405G02131-3G-5	Quarter Bell -Issue P/O to Groupe Altech: P/O _____ -Zinc plate, ASTM B633 TYPE 1 SC2 - Certificate of Conformity is required	Firmed	2/15/18	4 pcs	0 pcs ✓ 4x	4 pcs	\$11.25/pcs	\$45.00 AT 18/02/15
2	170256	RBT18560-3	Ring -Issue P/O to Groupe Altech; PO _____ -Black oxide finish, MIL-C-13924C Class 1 -Certificate of Conformity is required	Firmed	2/15/18	7 pcs	0 pcs	7 pcs	\$6.3158/pcs	\$44.21
3	170479	646.3910	Shim Issue P/O: _____ Cad Plating, CAD PLATE PER QQ-P-416, TYPE II, CLASS 2, CL2	Firmed	2/15/18	33 pcs	0 pcs ✓ 33x	33 pcs	\$4.16/pcs	\$137.28 AT 18/02/15
4	170481	646.3912	Shim Issue P/O: _____ Cat Plating, CAD PLATE PER QQ-P-416, TYPE II, CLASS 2, CL2	Firmed	2/15/18	22 pcs	0 pcs	22 pcs	\$4.16/pcs	\$91.52
5	170703	RBT18560-9	Cross Bar -Issue P/O to Groupe Altech; PO _____ -Black oxide finish, MIL-C-13924C Class 1 -Certificate of Conformity is required	Firmed	2/15/18	6 pcs	0 pcs	6 pcs	\$6.3158/pcs	\$37.89
6	171015	RBW6405G02131-3G-5	Quarter Bell -Issue P/O to Groupe Altech:	Firmed	2/15/18	4 pcs	0 pcs ✓ 4x	4 pcs	\$11.25/pcs	\$45.00 AT 18/02/15



2455, Rue Halpern | Saint-Laurent | Québec | H4S 1N9
 Tel: 514-335-3666 Fax: 514-335-3868
 www.groupaltech.com

Certificat de Conformité / Certificate of Compliance



Bon de Livraison / Packing Slip

006598 - 1

Livré à / Ship to

DART AEROSPACE LTD
 1270 ABERDEEN STREET
 HAWKESBURY, ON, K6A1K7
 CANADA
 Tel.: 613-632-5200 Fax.:

Client / Customer:

DART AEROSPACE LTD
 1270 ABERDEEN STREET
 HAWKESBURY, ON, K6A1K7
 CANADA
 BUYER:

Date expédition Ship date		Créé Par Generated By	Transport / No de Compte Courier / Acc. No.		Bon de commande Client Customer Purchase Order No.			
14-Feb-2018		Curtis Anderson			038997			
#Ligne Line#	No. de Série / # Pièce Part Number / Line Item Details Job # / Ref #	Description pièce(s)	CATG. U/M	Comm. /Ordered	Exp/ Shipped	Qté NC/ NC Qty	Qté Scrap/	À venir / Back Order
1	RBW6405G02131-3G-5 Rev.	QUARTER BELL 01-ZINC-CLEAR TRI [ZINC CLEAR TRIVALENT] SPÉC: ASTM B633 TYPE 1 SC2 ***	ZINC CH	4	4	0	0	0
3	646.3910 SHIM Rev.	646.3910 SHIM CAD PLATE PER QQ-P-416 TYPE 2 CLASS 2 ,CL2	CADMIUM CH	33	33	0	0	0
6	RBW6405G02131-3G-5 Rev.	QUARTER BELL 01-ZINC-CLEAR TRI [ZINC CLEAR TRIVALENT] SPÉC: ASTM B633 TYPE 1 SC2 ***	ZINC CH	4	4	0	0	0

DAS
38
9-88

Notes Additionnelles / Additional Notes

Epaisseur réelle
Actual Thickness

Inspecteur Qualité
Quality Inspector

Réçu par
Received By

JW

Nous certifions que les pièces énumérées ci-dessus ont été traitées en conformité avec votre commande et vos spécifications et rencontrent les exigences.
 Notre responsabilité financière et légale ne sera pas supérieure au montant de la facture issue.

We hereby certify that the parts listed above have been process in accordance with your purchase order and specifications and are in conformance with your requirements.
 Our financial and legal responsibility will not be higher than the amount of invoice.